

UDC 582.282

*Ain RAITVIIR** and *Ernestas KUTORGA***

A NEW AND SOME INTERESTING SPECIES OF *CROCICREAS* FROM LITHUANIA

Abstract. In the present report 9 taxa of *Crocicreas* — 1 new and 3 rare species from Lithuania are described. *Crocicreas alnifructum* Raitv. et Kutorga is a new species on alder cones. A new combination *Crocicreas epicalamia* (Fuckel) Raitv. et Kutorga is made and its differences from *C. stramineum* (Berk. et Br.) Carpenter are discussed. *C. furvum* (Graddon) Carpenter, known previously only from the type locality, is reported from Lithuania. 5 additional species of *Crocicreas* found in Lithuania are listed.

1. *Crocicreas alnifructum* Raitv. et Kutorga sp. nova.

Apothecia gregaria, substipitata vel breviter stipitata, cupulata, 0.2—0.3 mm in diametro, extus grisea. Hymenium sicca brunneum. Excipulum ectale ex textura oblita hyalina compositur. Asci cylindraceo-clavati, 73—83×7—8 μm. Sporae cylindraceo-fusoideae, 16—18.5×2—2.5 μm. *Crocicreas dispersellum* (Karst.) Carpenter similis, ascis longibus et substratis differt.

Holotypus: ad fructum *Alni incanae*, distr. Plunge, Lithuania, 26. 09. 1988, E. Kutorga leg. (TAA)

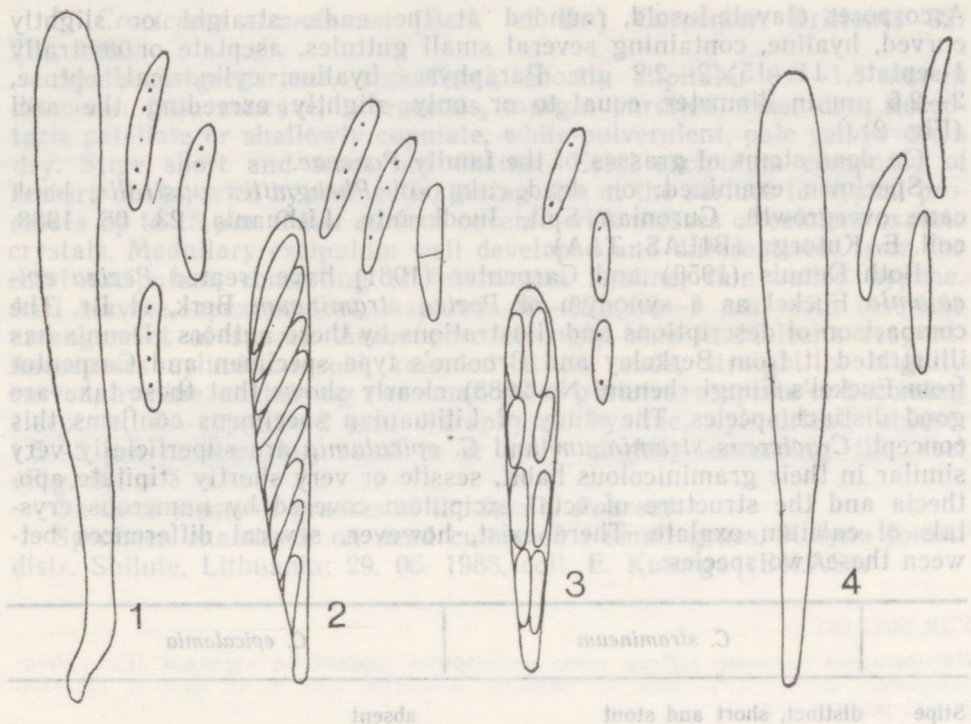
Apothecia gregarious, substipitate to shortly stipitate, 0.2—0.3 mm in diameter. Disc deeply concave to shallow concave, brownish when dry. Receptacle cupulate to shallow cupulate, smooth, dark gray. Stipe very short obconical to short cylindrical. Ectal excipulum composed of textura oblita, hyaline, externally covered by scanty golden-brown or hyaline hyphal processes, 15—18×3—3.5 μm. Medullary excipulum well developed and differentiated from the ectal excipulum, hyaline. Asci cylindrical-clavate, 8-spored with irregularly biseriate arrangement of spores, 73—83×7—8 μm. Ascus pore deep blue in Meltzer's reagent. Ascospores fusoid to cylindric-fusoid with rounded ends, aseptate, containing numerous small oil drops when mature, 16—18.5×2—2.5 μm. Paraphyses simple, cylindrical, 1.5 μm in diameter, apically slightly swollen up to 2.5 μm in diameter (Fig. 1).

On last year female catkins of *Alnus incana*, distr. Plunge, Lithuania, 26. 09. 1988, coll. E. Kutorga. (Holotype in TAA).

This species is in its anatomical features similar to *C. dispersellum* (Karst.) Carpenter, but differs from it in longer asci and growing on last-year female catkins of *Alnus incana* instead of *Carex* leaves. The difference in the character of substrate is so great that we decide to describe our fungus in the species and not in the varietal rank.

* Eesti Teaduste Akadeemia Zooloogia ja Botaanika Instituut (Institute of Zoology and Botany, Estonian Academy of Sciences). EE2400 Tartu, Vanemuise 21. Estonia.

** Lietuvos Mokslu Akademija Botanikos Institutas (Lithuanian Academy of Sciences, Institute of Botany). 2021 Vilnius, Zalinju eseru 47. Lithuania.



Figs. 1—4. Asci and ascospores of four species of *Crocicreas*: 1 — *C. alnifrutum*; 2 — *C. epicalamia*; 3 — *C. stramineum*; 4 — *C. furum*.

2. *Crocicreas coronatum* (Bull.) Carp., Brittonia 32: 269, 1980, mainly on dead stems of herbaceous plants, but also on decaying wood. 15 collections.

3. *C. cyathoides* (Bull.) Carp., Brittonia 32: 269, 1980, var. *cyathoides*, mainly on dead stems of herbaceous plants, also on *Phragmites australis* and decaying wood. 57 collections.

4. *C. cyathoides* (Bull.) Carp. var. *cacaliae* (Pers.) Carp., Brittonia 32: 269, 1980 — on dead stems of herbaceous plants. 3 collections.

5. *C. cyathoides* (Bull.) Carp. var. *pteridicola* (H. et P. Crouan) Carp., Brittonia 32: 269, 1980 — on dead stems of *Pteridium aquilinum*. 7 collections.

6. *Crocicreas epicalamia* (Fuckel.) Raitv. et Kutorga comb. nov. Basionymum: *Peziza epicalamia* Fuckel, Jahrb. Nassauischen Vereins Naturk. 27—28: 61, 1873.

Apothecia gregarious, superficial, sessile to subsessile, 0.3—1.0 mm in diameter. Disc. concave, ochraceous, margin enrolled when dry. Receptacle patellate or shallowly cupulate, white-pulverulent, pale yellow when dry. No distinct stipe present. Ectal excipulum composed of textura oblita, with hyaline cells giving rise at the surface to hyphal processes up to 15 μ m. Outer surface covered with masses of calcium oxalate crystals. Medullary excipulum well developed and differentiated from the ectal excipulum consisting of interwoven hyaline, thin-walled hyphae. Asci clavate, apex conical, 8-spored, $45\text{--}56 \times 4\text{--}5 \mu\text{m}$, with obliquely uniseriate arrangement of spores. Ascus pore strongly blue in Melzer's reagent.

Ascospores clavate-fusoid, rounded at the ends, straight or slightly curved, hyaline, containing several small guttules, aseptate or centrally 1-septate, $11-15 \times 2-2.2 \mu\text{m}$. Paraphyses hyaline, cylindrical, obtuse, $2-2.5 \mu\text{m}$ in diameter, equal to or only slightly exceeding the asci (Fig. 2).

On dead stems of grasses of the family *Poaceae*.

Specimen examined: on dead culms of *Phragmites australis*, bank cane overgrowth, Curonian Spit, Juodkrante, Lithuania, 23. 08. 1988, coll. E. Kutorga (BILAS; TAA).

Both Dennis (1956) and Carpenter (1981) have treated *Peziza epicalamia* Fuckel as a synonym of *Peziza stramineum* Berk. et Br. The comparison of descriptions and illustrations by these authors (Dennis has illustrated it from Berkeley and Broome's type specimen and Carpenter from Fuckel's *Fungi rhenani* No 2683) clearly shows that these taxa are good distinct species. The study of Lithuanian specimens confirms this concept. *Crocicreas stramineum* and *C. epicalamia* are superficially very similar in their graminicolous habit, sessile or very shortly stipitate apothecia and the structure of ectal excipulum covered by numerous crystals of calcium oxalate. There exist, however, several differences between these two species:

	<i>C. stramineum</i>	<i>C. epicalamia</i>
Stipe	distinct, short and stout	absent
Asci	with biseriate arrangement of spores	with obliquely uniseriate arrangement of spores
Spores	$6-10 \times 1.5-2 \mu\text{m}$, narrowly elliptic, with 2 small polar guttules	$11-15 \times 2-2.2 \mu\text{m}$, clavate-fusoid, with several small guttules

7. *Crocicreas furvum* (Graddon) Carpenter, *Brittonia* 32: 270, 1980.

Apothecia scattered or gregarious, superficial, long-stipitate. Disc $0.5-1.0 \text{ mm}$ in diameter, concave, pale grey or ochraceous, drying sometimes with pink shade. Margin crenulate when dry, enrolled slightly over the hymenium, scurfy. Receptacle shallow cupulate, dark brown, minutely scurfy. Stipe central, usually slightly tapered toward the base, variable in length, usually equal to disc diameter, light brown, scurfy. Ectal excipulum composed of *textura oblita*, externally covered by several layers of pigmented brown and roughened cells. Medullary excipulum composed of interwoven light brown, thin-walled hyphae. Asci clavate, tapered at the base, apex conical, 8-spored with irregularly biseriate arrangement of spores, $(60-63-73(-75)) \times 6-6.6 \mu\text{m}$. Ascus pore blue in Melzer's reagent. Ascospores fusoid, tapered towards the ends, but ends usually rounded, often slightly curved, hyaline, aseptate or developing a central septum, containing two oblong guttules, $(14-15) \times 17(-19) \times 1.8-2 \mu\text{m}$. Paraphyses cylindrical, obtuse, slightly broader towards the apex up to $1.5-2.2 \mu\text{m}$ in diameter (Fig. 4).

Specimen examined: On dead stems of *Deschampsia caespitosa* in the meadow, Saudargas, distr. Shakiai, Lithuania, 12. 08. 1989, coll. E. Kutorga (BILAS; TAA).

C. furvum is a very distinct but probably a very rare species. Previously it has been known only from the type locality (Carpenter, 1981).

8. *C. megalosporum* (Rea) Carp. var. *gramineum* (Rehm) Carp.; *Brittonia* 32: 270, 1980 — on dead stems of *Phragmites australis*. 1 collection: Plateliai lake bank cane overgrowth, distr. Plunge, Lithuania, 26. 09. 1988; coll. E. Kutorga (BILAS).

9. *Crocicreas stramineum* (Berk et Br.) Carpenter, Brittonia 32: 271, 1980.

Apothecia gregarious, superficial, shortly stipitate, 0.5—1.5 mm in diameter. Disc concave, ochraceous, margin enrolled when dry. Receptacle patellate or shallowly cupulate, white-pulverulent, pale yellow when dry. Stipe short and stout but distinct. Ectal excipulum composed of textura oblita, with hyaline cells, giving rise at the surface to hyphal processes up to 15 μm . Outer surface covered with masses of calcium oxalate crystals. Medullary excipulum well developed and differentiated from the ectal excipulum, consisting of interwoven hyaline, thin-walled hyphae. Asci clavate, apex conical, 8-spored, 40—55 \times 4.5—5 μm , with biseriate arrangement of spores. Ascus pore strongly blue in Melzer's reagent. Ascospores cylindrical-fusoid, rounded at the ends, straight or slightly curved, hyaline, containing two small polar guttules, aseptate or becoming 1-septate, 6—10 \times 1.5—2 μm . Paraphyses hyaline, cylindrical, obtuse, 1.5—2 μm in diameter, equal to or only slightly exceeding the asci (Fig. 3).

On dead stems of grasses of the family *Poaceae*.

Specimen examined: on dead culms of a small grass, Kulynu forest, distr. Shilute, Lithuania; 29. 06. 1988, coll. E. Kutorga (BILAS).

REFERENCES

- Carpenter, S. E. 1981. Monograph of *Crocicreas* (Ascomycetes, Helotiales, Leotiaceae). — Mem. N. Y. Bot. Garden, 33, 1—290.
Dennis, R. W. G. 1956. A revision of the British Helotiaceae in the herbarium of the Royal Botanic Gardens. Kew, with notes on related European species. — Mycol. Paper, 62, 1—216.

Presented by K. Elberg

Received
Feb. 14, 1992

Ain RAITVIIR, Ernestas KUTORGA

PEREKONNA CROCICREAS

ÜKS UUS JA MÕNED TEISED HUUVITAVAD LIIGID LEEDUST

On käsitletud perekonna *Crocicreas* üheksat Leedust leitud liiki. Nendest üks, *Crocicreas alnifructum* Raitv. et Kutorga, on teadusele uus. On kindlaks tehtud uus kombinatsioon *Crocicreas epicalamia* (Fuckel) Raitv. et Kutorga ja käsitletud selle erinevusi teisest haruldasest liigist *C. stramineum* (Berk. et Br.) Carpenter. Leedust on leitud ka *C. furvum* (Graddon) Carpenter, mis seni oli teada ainult liigi tüüpleiukohast Inglismaalt.

Айн РАЙТВИИР, Эрнестас КУТОРГА

ОДИН НОВЫЙ И НЕКОТОРЫЕ ДРУГИЕ ИНТЕРЕСНЫЕ ВИДЫ РОДА CROCICREAS В ЛИТВЕ

В Литве найдено 9 видов рода *Crocicreas*. *Crocicreas alnifructum* Raitv. et Kutorga описан как новый вид для науки. Предлагается новая комбинация *Crocicreas epicalamia* (Fuckel) Raitv. et Kutorga и обсуждаются различия между этим и другим редким видом *C. stramineum* (Berk et Br.) Carpenter. Из Литвы найден также *C. furvum* (Graddon) Carpenter, который до сих пор был известен только с типового местонахождения в Англии.